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Conference of the
Max Planck Institute

Progress and Visions in Quantum Theory in View of Gravity

Bridging foundations of physics and mathematics

October 01 – 05, 2018

SPEAKERS

Markus Aspelmeyer – UNIVERSITY OF VIENNA
Časlav Brukner – IQOQI VIENNA
Tian Yu Cao – BOSTON UNIVERSITY
Dirk Deckert – LUDWIG MAXIMILLIAN UNIVERSITY OF MUNICH
Chris Fewster – UNIVERSITY OF YORK
Jürg Fröhlich – ETH ZURICH
Lucien Hardy – PERIMETER INSTITUTE
Olaf Lechtenfeld – UNIVERSITY OF HANOVER
Shahn Majid – QUEEN MARY UNIVERSITY OF LONDON
Gregory Naber – DREXEL UNIVERSITY
Hermann Nicolai – MPI FOR GRAVITATIONAL PHYSICS
Rainer Verch – LEIPZIG UNIVERSITY

DISCUSSANTS

Eric Curiel – MCMP MUNICH / BHI HARVARD
Claudio Dappiaggi – UNIVERSITY OF PAVIA
Detlef Dürr – LUDWIG MAXIMILLIAN UNIVERSITY OF MUNICH
Michael Dütsch – UNIVERSITY OF GÖTTINGEN
Christian Fleischhack – PADERBORN UNIVERSITY
Harald Grosse – UNIVERSITY OF VIENNA
Stefan Hollands – LEIPZIG UNIVERSITY
Bernard Kay – UNIVERSITY OF YORK
Klaas Landsmann – RADBOUD UNIVERSITY
Valter Moretti – UNIVERSITY OF TRENTO
Peter Pickl – LUDWIG MAXIMILLIAN UNIVERSITY OF MUNICH
Nicola Pinamonti – UNIVERSITY OF GENOVA
Karl-Henning Rehren – UNIVERSITY OF GÖTTINGEN
Martin Reuter – JOHANNES GUTENBERG UNIVERSITY
Roderich Tumulka – UNIVERSITY OF TÜBINGEN
Jakob Yngvason – UNIVERSITY OF VIENNA

ABSTRACT

The conference focuses on a critical discussion of the status and prospects of current approaches in quantum mechanics and quantum field theory, in particular concerning gravity. In contrast to typical conferences, instead of reporting on the most recent technical results, participants are invited to discuss

- visions and new ideas in foundational physics, in particular concerning foundations of quantum field theory
- which physical principles of quantum (field) theory can be considered fundamental in view of gravity
- new experimental perspectives in the interplay of gravity and quantum theory.

In tradition of the meetings in Blaubeuren (2003 and 2005), Leipzig (2007) and Regensburg (2010 and 2014), the conference brings together physicists, mathematicians and philosophers working in foundations of mathematical physics.

The conference is dedicated to Eberhard Zeidler, who sadly passed away on 18 November 2016. He was the founding director of the Max Planck Institute for Mathematics in the Sciences. With his outstanding knowledge and warm-hearted personality, he helped shape this conference series. Being thankful for all the inspiration he gave us, the organizers aim at keeping alive his scientific visions.

www.mis.mpg.de/qft2018

MAX-PLANCK-GESELLSCHAFT

SCIENTIFIC ORGANIZERS

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REGISTRATION

Further information as well as registration available online.

Local Organization Associate:
Research Profile Area Mathematical and Computational Sciences

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